

REMARKS

Claims 2, 7, and 18-21 are pending in this application. By this Amendment, claims 2 and 7 are amended, claims 11, 15, 16 and 17 are canceled, and claims 20 and 21 are added. The amendments to claims 2 and 7 are supported in the application in at least page 9, lines 11-13, and page 10, lines 2-6, for example. New claims 20 and 21 are supported in at least page 10, lines 20-24, for example. No new matter is added. In view of at least the following remarks, reconsideration and allowance are respectfully requested.

The courtesies extended to Applicants' representative by Examiner Refai at the interview held November 5, 2007 are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below and constitute Applicants' record of the interview.

Claims 2, 7, 11 and 15-19 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. This rejection is respectfully traversed.

The Office Action alleges that the pending claims fail to meet the written description requirement alleging that the claimed feature reciting that the multicast address is "prestored" in a storing unit is not supported in the specification. Specifically, the Office Action states that the phrase "storing unit that prestores a particular multicast address," and "the particular multicast address prestored in the storing unit," in claims 2 and 7, do not find support in the specification. Similarly, the Office Action alleges that the phrase "the particular multicast address prestored in the storing unit prior to being included as a node on the network," in claims 18 and 19, also fails to find support in the specification.

However, it is well settled that claim features may be supported in the specification by either express, implicit or inherent disclosure. That is, there is no *in haec verba* requirement for specific claim language. See MPEP §2163(I)(B). Whether or not a claim complies with

the written description requirement depends only on "whether the specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, Applicant was in possession of the invention as now claimed." *Id.* quoting *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-1564 (Fed. Cir. 1991).

In this regard, as discussed in the interview, although the specification of the pending application doesn't use the identical phrase "prestore" or "prestored" it is readily apparent from the specification that the inventor was in possession of embodiments where a multicast address is prestored in the storing unit of a node, such that the node provides notification that the node is a member of the particular multicast address that is prestored in the storing unit, as required in claims 2 and 7. For example, as stated in the specification at page 11, lines 13-16, "according to the embodiment, the particular multicast address is a multicast address that is stored in the ROM of each of the network printers 100, 200 when the printers are produced." As further described in the specification at page 11, lines 10-13, and illustrated at Fig. 5, item S1, the computer provides notification to a router that it is a member of the particular multicast address, where the particular multicast address may be prestored in its memory by various methods. Similarly, regarding claims 18 and 19, because the specification illustrates embodiments where the printers are provided with multicast addresses that are prestored during manufacture, it is also clear that the Applicants were in possession of embodiments where the multicast address is prestored in the mode "prior to being included as a node on the network."

The features recited in claims 2, 7, 18 and 19 derive support from the specification and drawings accordingly. Thus, it is apparent from the original application that Applicant was in possession of the claimed invention because the specification explicitly describes circumstances where the multicast address is prestored in a storing unit of the node. Accordingly, the §112, first paragraph rejections should be withdrawn.

Claims 2, 7, 11 and 15-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,496,859 to Roy et al. ("Roy") in view of U.S. Patent No. 6,801,949 to Bruck et al. ("Bruck") and in further view of U.S. Patent No. 6,331,983 to Haggerty et al. ("Haggerty"). These rejections are respectfully traversed.

The applied references fail to support an obviousness rejection because, even combined, they fail to disclose or suggest at least an IP address setting system including "each node having a storing unit that prestores a particular multicast address," and where "each node providing notification that the node is a member of the particular multicast address" as recited in independent claim 2. Regarding the claimed element that the nodes provide notification that they are members of the multicast address, the Office Action does not specifically address this limitation. The Office Action generally cites Haggerty as teaching "that members of a particular multicast group maintain a multicast group address in order to receive message addressed to that particular multicast group." See Office Action at page 4. However, the Office Action does not point to any disclosure in Haggerty that indicates that the nodes on a network provide notification that each node is a member of a multicast address, as required in claim 2. Furthermore, as discussed during the interview, the nodes described in Haggerty request membership in a multicast host group, rather than providing notification that the node is a member of the particular multicast address. See Haggerty at col. 4, lines 3-13.

Similarly, because the node must request membership in the multicast host group, it is also apparent that the multicast address of interest is not prestored in a storing unit, as recited in claim 2. In this regard, while Haggerty does not describe in detail how the multicast address is assigned to each node, it appears that each node does not have a multicast address prestored in its memory because, otherwise, it would not request membership from a multicast host group.

The applied references also fail to disclose or suggest a system that includes an IP address setting device having an address information designation unit which "designates one node, which has not yet been set with correct address information," and "a setting packet transmission unit that transmits a setting packet to the particular multicast address, the setting packet including the address information set by the address information designation unit," as recited in claim 2. Thus, claim 2 embodies a system where the IP address setting device can set the IP address for a node by using multicast, even if the IP address setting device does not know the IP address of the node.

In contrast, the applied references do not relate to setting address information for a node. Roy and Haggerty only generally refer to communication between a device and a node, where the address information has already been set at the node so that communication between the device and the node is possible. As described in Roy at col. 2, lines 22-39, a unicast transmission is used to communicate between network devices, where the address information of the network devices is already set. Applicants note that that if a source node does not know the IP address of a destination node, the source node cannot transmit a packet using unicast. Accordingly, even if combined, Roy and Haggerty do not disclose or suggest a system where the IP address setting device can set the IP address for a node using multicast, even if the IP address setting device does not know the IP address for the node.

Furthermore, as discussed during the interview, the applied references also fail to disclose or suggest that "each node has a response transmitting unit that transmits, in response to the request packet, a response to a multicast address, to which the IP address setting device has joined, each response including the MAC address of the each node," as also recited in claim 2.

Roy relates to a system which sends a broadcast request to all devices in a network, and DLP capable devices 12, 13 and 14 respond to PC 11 using a unicast address (see Fig. 5).

According to Roy's device, the response from the devices can be transmitted by using unicast because address information of the source device has already been correctly set and the source devices can communicate with the node. Haggerty describes transmitting a packet using multicast, but does not suggest using multicast to transmit a response to the packet.

Thus, even if Roy and Haggerty are combined as suggested in the Office Action and applied to an address information setting, a unicast would be used to transmit a response to the packet.

In contrast, one object of the present disclosure is to set address information of a node from an IP address setting device. That is, the present disclosure is on the assumption that a node, which has not been set with correct address information, exists on a network. Even though the node knows address information of the IP address setting device (destination), the node may not be able to transmit a response to the IP address setting device in response to a request packet because the node (source) has not been set with correct address information. Specifically, even if a node knows the IP address for a destination device, the node cannot transmit to the destination device using unicast if a default gateway and a subnet mask have not been correctly set on the node. Similarly, in the alleged combination of Roy and Haggerty (if applied to address information setting), if the correct address information of a node has not been set, a response could not be transmitted using unicast from the node to the IP address setting device. Thus, even if Roy and Haggerty are combined, the IP setting device would not be able to set address information of the node in this circumstance.

According to the present disclosure, a response is transmitted from the node using multicast to the IP address setting device in response to a request. Accordingly, even if the address information has not yet been set at a certain node, a response can be transmitted from that node to the IP address setting device. Once the response is received, the IP address setting device can perform a proper address information setting process.

Additional advantages can be achieved by the present disclosure which are not achieved by the combination of the applied references. For example, where a node is moved onto a new network, new address information typically has to be set at the node so that it can operate in the new network. In some cases, where conventional unicasting techniques are used, the node may transmit a response indicating that it is located on the old network. Also, if the IP address setting device is located in the new network, in some cases the node may unicast to the settings for the old network and the node will erroneously determine that the IP address setting device is located outside of the new network. According to the present disclosure, in one embodiment, the response from the node can be transmitted using multicast, and accordingly the response can be transmitted from the node to the IP address setting device regardless of the location of the node, the location of the IP address setting device, and the address information of the node. See, also the specification at page 4, lines 3-8; and page 14, lines 3-10.

The features and advantages of using multicasting to set IP addresses of network nodes described above and outlined in the specification are not suggested by the applied references. In this regard, the motivation for combining the references suggested in the Office Action is impermissible hindsight. See Office Action at page 4. There is no suggestion in the art that it is desirable to assign IP addresses to nodes by sending a request to a node using multicast, responding to the request using multicast or transmitting a setting packing including address setting information to a node using multicast. See MPEP §2143.01(I) which states that, to support an obviousness rejection, the prior art must at least suggest the desirability of the claimed invention. Thus, for at least the above reasons, independent claim 2 is patentable over the applied references.

Independent claim 7 relates to an IP address setting method including similar features to those referred to in connection with claim 2 above, and is therefore also patentable over the applied references.

Claims 18 and 19 depend from one of independent claims 2 and 7 and are therefore also patentable over the applied references for at least the reasons enumerated above, as well as for the additional features they recite.

For example, claims 18 and 19 recite that the multicast address is "prestored in the storing unit prior to being included as a node on the network." This feature clearly distinguishes Haggerty where each node is stated to request its membership over the network. Thus, for at least this reason, claims 18 and 19 are patentable over the applied references.

New claims 20 and 21 depend from claims 2 and 7 respectively, and recite that the address information further includes a default gateway and a subnet mask. For at least the reasons discussed above, claims 20 and 21 are also patentable over the applied references.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Petition for Extension of Time

Date: December 3, 2007

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